



BLUESPARK

BLUESPARK[®] Technology

Transforming Aging Wells & Improving Production
with High-Pulsed Power

Applications

Improve the Life of Marginal Oil Wells



Huge return for well owners with limited investment

Reduce Skin ⁽¹⁾ in New Completions



Tried in wells where production could not be initiated – improved production in a large majority of cases

Descaling of Safety Equipment



Remove scale from safety equipment such as subsurface safety device (SSSD), restoring functionality to wells that would otherwise stop producing

Sand Control Completions



Treat damaged sand screens (even where other methods failed); successful deployment in the North Sea and California

Scale Removal



Remove scaling by breaking it down, and is particularly effective in carbonate reservoir completions; provides a solution in wells with acid-resistant barium sulphate scaling

Injector Wells



Proven to significantly increase volumes injected, while reducing cost of injection



BLUESPARK® Technology

- **BLUESPARK® takes a small amount of energy (1000 joules)** from the surface to create a hydraulic pulse downhole. **BLUESPARK®** technology releases the energy in 5 microseconds to create a high-powered event.
- The **10,000 PSI** hydraulic pulse is created to treat well for primary production stimulation and remove scales, mud cakes, fines, etc.
- **3,000 - 12,000** pulses are repeated per run in the hole, depending on the operation.



BLUESPARK Success Story- North Sea, Norway

NSEA-PW-152 – Scale Removed from Sand Screens

CHALLENGE:

- Reduced production due to BaSO4 scale plugging off sand screens
- Scale inhibition had limited success, and an internal restriction prevented the use of milling

SOLUTION:

- Decision made to use the **BLUESPARK**® tool
- Slim profile of the tool allowed it to reach all sections of the sand screens
- Past treatments have proved highly successful

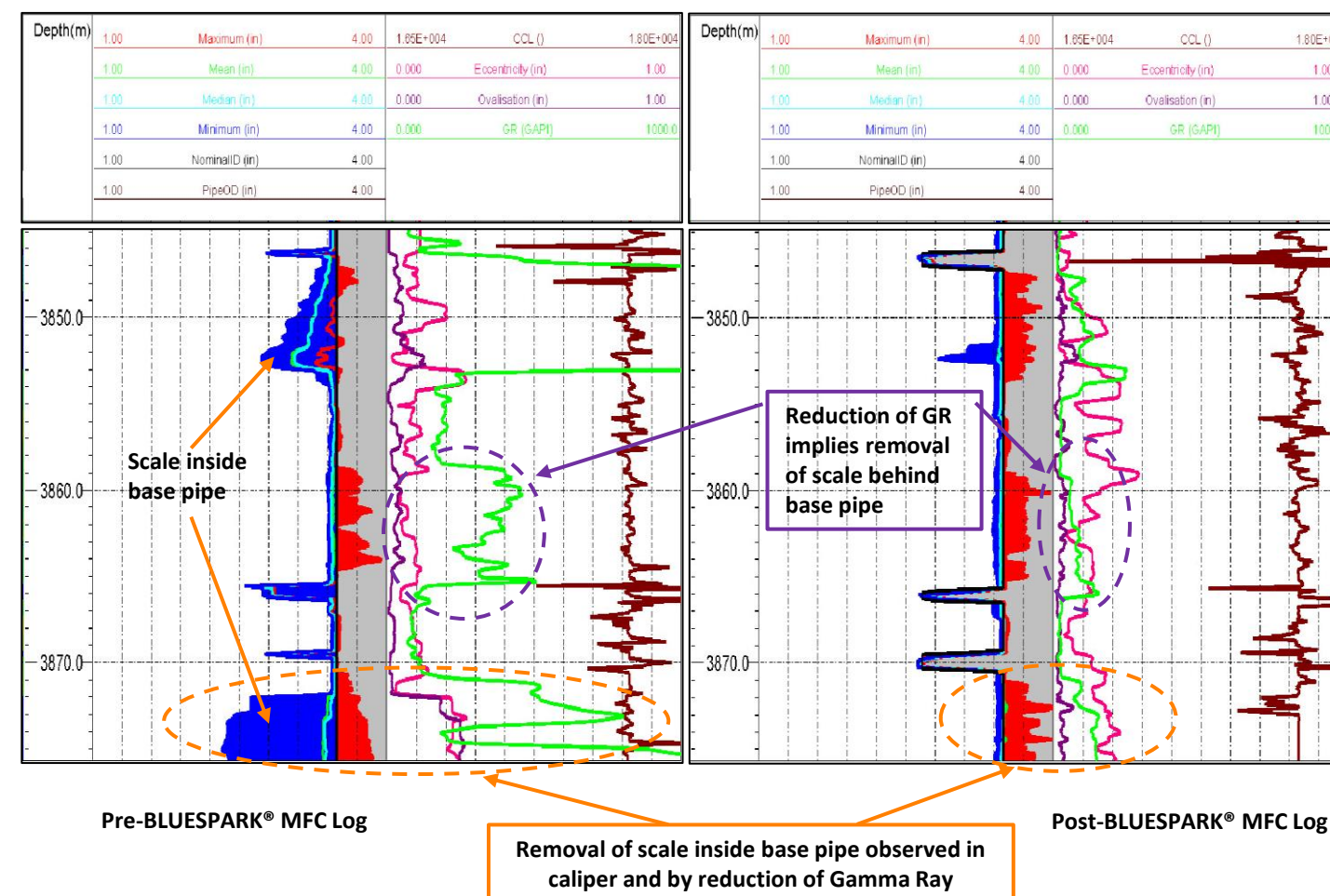
OUTCOME:

- Improved connectivity to the reservoir by clearing out blockages using electro-hydraulic pulsing technology
- The **BLUESPARK**® 212 tool was run on a third-party E-Line to the treatment interval
- 74 m (243 ft) of interval was treated in 27 hours of treatment time with no operational issues
- A multi-finger caliper log (MFC) was run to compare to the log run 5 months earlier to confirm the removal of the scale both inside and outside of the base pipe
- Total production increased from 3,200 b/d to 8950 b/d, a 180% increase
- The post-**BLUESPARK**® oil production increased from 50 BOPD to 138 BOPD, a 175% increase



175%
increase in oil
production

DEPTH: 3,800M (12,500FT)
TEMPERATURE: 90 °C (194 °F)





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Reach Out to Learn More!

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